

## Remarks

### The Amendments

Claim 1 has been amended to delete the phrase “or a biologically functional variant thereof”. It is the Applicant’s position that biologically functional variants of SEQ ID NO:6 are enabled, have written description, and are not anticipated by U.S. Patent No. 6,218,362. Applicants have deleted the phrase in order to advance prosecution of the application and without prejudice to prosecuting the original claims of this application in a continuing application.

Claim 2 has been amended to recite SEQ ID NO:6. This is not a narrowing amendment and is made solely to provide a reference to a sequence listing identification number.

Claim 4 has been amended to remove the reference to “the biologically functional variant,” similar to claim 1 (see above). Claim 4 now recites that a lantibiotic of claim 1 can comprise one or two conservative amino acid substitutions. Support for the amendment can be found in the specification at, *inter alia*, the paragraph spanning pages 10 and 11.

Claims 9, 13, 16 and 24 have been canceled without prejudice to their prosecution in a continuing application.

Claim 5 has been amended to delete reference to position number 19 and to change the claim’s dependency.

Claims 6, 7 and 8 have been amended to change their dependency.

Claim 10 has been amended to remove reference to “the biologically functional variant”, similar to the amendment of claim 1 (see above).

New claims 32-36 have been added. Support for the claims can be found in the specification at, *inter alia*, the paragraph spanning pages 10 and 11.

These amendments add no new matter and applicants respectfully request their entry.

**Objection to Claim 2**

Claim 2 stands as objected to for failing to recite a SEQ ID NO. The claim has been amended to recite SEQ ID NO:6. Applicants respectfully request withdrawal of the objection to claim 2.

**Rejection of Claims 1 and 4-25 Under Obviousness-Type Double Patenting**

Claims 1 and 4-25 stand rejected under the judicially created doctrine of obviousness-type double patenting. Claims 9, 13, 16, and 24, have been canceled. The rejection is therefore moot as applied to these claims. Applicants respectfully traverse the rejection as it applies to claims 1, 4-8, 10-12, 14-15, 17-23 and 25.

Claim 1 has been amended to remove reference to biologically active variants in order to advance prosecution. It is believed that this amendment obviates the need for a terminal disclaimer. Applicants respectfully request withdrawal of the rejection.

**Rejection of Claims 1 and 4-25 Under 35 U.S.C. §112, first paragraph**

Claims 1 and 4-25 stand rejected under 35 U.S.C. §112, first paragraph as allegedly lacking written description. Claims 9, 13, 16, and 24 have been canceled. The rejection is therefore moot as applied to these claims. Applicants respectfully traverse the rejection as it applies to claims 1, 4-8, 10-12, 14-15, 17-23 and 25.

The Office Action asserts that the term “biologically active variants” in claim 1 does not have adequate written description. The term, however, has adequate written

description in the specification. The specification discloses a genus of lantibiotic molecules and certain substitutions that can occur at, for example, amino acid positions 1, 2, 4, 5, 6, 13, 19 or combinations thereof. Applicants have, however, chosen to delete the term, without prejudice to the prosecution of the original claim in a continuing application, in order to advance prosecution of this application. Applicants respectfully request withdrawal of the rejection.

**Rejection of Claims 1 and 4-25 Under 35 U.S.C. §112, first paragraph**

Claims 1 and 4-25 stand rejected under 35 U.S.C. §112, first paragraph as allegedly lacking enablement. Claims 9, 13, 16, and 24 have been canceled. The rejection is therefore moot as applied to these claims. Applicants respectfully traverse the rejection as it applies to claims 1, 4-8, 10-12, 14-15, 17-23 and 25.

The Office Action asserts that polypeptides encompassing “biologically active variants” in claim 1 are not enabled. The polypeptides, however, has adequate enablement. The specification discloses a genus of lantibiotic molecules and certain substitutions that can occur at, for example, amino acid positions 1, 2, 4, 5, 6, 13, 19 or combinations thereof. Applicants have, however, chosen to delete the term in order to advance prosecution of the application without prejudice to prosecution of the original claims in a continuing application. Applicants respectfully request withdrawal of the rejection.

**Rejection of Claims 1 and 4-25 Under 35 U.S.C. §102(a) and 35 U.S.C. §102(e)**

Claims 1 and 4-25 stand rejected under 35 U.S.C. §102(a) and 35 U.S.C. §102(e) as allegedly anticipated by U.S. Pat. No. 6,218,362 (the ‘362 patent). Claims 9, 13, 16, and 24 have been canceled. The rejection is therefore moot as applied to these claims.

Applicants respectfully traverse the rejection as it applies to claims 1, 4-8, 10-12, 14-15, 17-23, and 25.

The Office Action asserts that claims 1 and 4-25 are anticipated by the '362 patent, and in particular asserts that a polypeptide of SEQ ID NO:10 is anticipated by the '362 patent. In order to advance prosecution of this application, the claims have been amended to delete any subject matter directed to SEQ ID NO:10, without prejudice to prosecution of the original claims in a continuing application. The '362 patent does not teach or suggest the polypeptides of SEQ ID NO:6-9 and 11. The '362 patent similarly does not teach or suggest SEQ ID NO:6 with substitutions specifically at amino acid residues 1, 2, 4, 5, 6, 13, 19 or combinations thereof other than SEQ ID NO:10.

**Rejection of Claims 1 and 2 Under 35 U.S.C. §102(a)**

Claims 1 and 2 stand rejected under 35 U.S.C. §102(a) as allegedly anticipated by Smith *et al.* Eur J Biochem. 2000 Dec;267(23):6810-6. Applicants respectfully traverse the rejection.

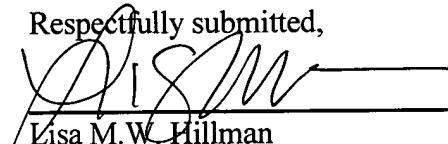
Attached is an affidavit of Jeffery D. Hillman submitted under 37 C.F.R. §1.131. The affidavit antedates the Smith reference by showing that Dr. Hillman is the inventor of the claimed invention and that the Smith reference is not "by another". Applicants respectfully request withdrawal of the rejection in view of the affidavit.

**Rejection of Claims 11-12, 15, and 18-23 Under 35 U.S.C. §103(a)**

Claims 11-12, 15, and 18-23 stand rejected under 35 U.S.C. §103(a) as allegedly obvious over Smith *et al.* Eur J Biochem. 2000 Dec;267(23):6810-6. Applicants respectfully traverse the rejection.

The affidavit of Jeffery D. Hillman (see above) demonstrates that the Smith reference is not by another. Applicants therefore respectfully request withdrawal of the rejection in view of the affidavit.

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Respectfully submitted,  
  
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